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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte BAO TRAN

Appeal 2011-007564
Application 11/745,549
Technology Center 2100

Before ST. JOHN COURTENAY III, THU A. DANG, and
LARRY J. HUME, *Administrative Patent Judges*.

COURTENAY, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

Appellant appeals under 35 U.S.C. § 134(a) from a final rejection of claims 1-10 and 12-21. Claim 11 has been cancelled. We have jurisdiction under 35 U.S.C. § 6(b).

We affirm-in-part.

INVENTION

Appellant's invention is directed to a method for analyzing documents, particularly intellectual property (Spec. page 1, first paragraph). Independent claim 1, represented below with contested limitations emphasized, is illustrative of the subject matter on appeal:

1. A method for processing an intellectual property (IP) comprising:

providing an automated agent to execute one or more searches to locate one or more documents relating to an IP interest, *the agent determining semantic relationship among one or more IP documents by determining similarity in paragraphs, linking similar paragraphs to model the semantic relationship, and extracting text from sentences reflecting the semantic relationship,*

accessing a user profile to determine the user's IP interest and identify one or more IP documents each having a tag responsive to the IP interest;

ranking one or more documents matching the semantic relationship located by the automated agent; and

displaying the one or more documents located by the automated agent.

REJECTIONS

- R1. Claims 1-6, 12, 13, and 18-21 stand rejected under 35 U.S.C. § 103(a) over the combined teachings and suggestions of U.S. Patent Publication 2001/0049707 (“Tran”), in view of US Patent 6,615,209 (“Gomes”).
- R2. Claims 7, 10, and 14-16 stand rejected under 35 U.S.C. § 103(a) over the combined teachings and suggestions of Tran in view of Gomes, and further in view of U.S. Patent Publication 2002/0042784 (“Kerven”).
- R3. Claims 8 and 9 are rejected under 35 U.S.C. § 103(a) over the combined teachings and suggestions of Tran in view of Gomes, and further in view of U.S. Patent Publication 2003/0172020 (“Davies”).
- R4. Claim 17 is rejected under 35 U.S.C. § 103(a) over the combined teachings and suggestions of Tran in view of Gomes, and further in view of U.S. Patent Publication 2001/0032201 (“Lee”).

GROUPING OF CLAIMS

Based on Appellant’s arguments, we decide the appeal of rejection R1 on the basis of claims 1, 2, and 21, which are argued separately. We address the rejection R2 of claim 10 separately, *infra*.

Appellant has presented no separate argument with regard to rejection R2 of dependent claims 7 and 14-16. Appellant has presented no separate argument with regard to rejections R3 (claims 8-9) and R4 (claim 17).

Arguments not made are considered waived. *See* 37 C.F.R.

§ 41.37(c)(1)(vii)(2004).¹

¹ Appellant filed a Notice of Appeal on July 7, 2010. The date of filing the Notice of Appeal determines which set of rules applies to an ex parte appeal. If a Notice of Appeal is filed prior to January 23, 2012, then the 2004 version of the Board Rules last published in the 2011 edition of Title 37 of

ANALYSIS

We disagree with Appellant's contentions regarding the Examiner's § 103 rejection R1 of claims 1-6, 12, 13, and 18-21. We adopt as our own: (1) the findings and reasons set forth by the Examiner in the action from which this appeal is taken, and (2) the reasons set forth by the Examiner in the Answer in response to arguments made in Appellant's Appeal Brief. (Ans. 15-22, headings A through G). We highlight and address specific findings and arguments below:

A. Combinability of Tran and Gomes under § 103

Issue: Under § 103, did the Examiner err by improperly combining the Tran and Gomes references?

The Supreme Court guides that the conclusion of obviousness can be based on the interrelated teachings of multiple patents, the effects of demands known to the design community or present in the marketplace, and the background knowledge possessed by a person having ordinary skill in the art. *KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 416 (2007). The test for obviousness is what the combined teachings of the references would have suggested to one of ordinary skill in the art. *See In re Kahn*, 441 F.3d 977, 987-88 (Fed. Cir. 2006); *In re Young*, 927 F.2d 588, 591 (Fed. Cir. 1991); and *In re Keller*, 642 F.2d 413, 425 (CCPA 1981). The Examiner must show some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness. *KSR*, 550 U.S. at 418 (citing *Kahn*, 441 F.3d at 988).

the Code of Federal Regulations (37 C.F.R. § 41.1) applies to the appeal. *See also* MPEP 1220, Rev. 8, July 2010.

Appellant contends the Examiner has relied on impermissible hindsight, and “there is no suggestion to modify Tran with Gomes to arrive at the invention as claimed.” (App. Br. 10). Appellant further contends:

There is no reasonable expectation of success since the needs of semantic search differs from Gomes’s need for duplicate detection that uses query-relevant information to limit the portion(s) of documents to be compared for similarity for efficiency reasons. In fact, combining the two would result in a system that more efficiently searches IP documents by removing similar documents. However, the combination would not be semantic search systems.

(App. Br. 10) (emphasis omitted).

Our reviewing court guides: “[o]bviousness does not require absolute predictability of success . . . all that is required is a reasonable expectation of success.” *In re Kubin*, 561 F.3d 1351, 1360 (Fed. Cir. 2009) (quoting *In re O’Farrell*, 853 F.2d 894, 903-04 (Fed. Cir. 1988) (emphasis and internal quotation marks omitted)). The Supreme Court further guides that “[i]n determining whether the subject matter of a patent claim is obvious, neither the particular motivation nor the avowed purpose of the patentee controls.” *KSR*, 550 U.S. at 419. Moreover, “[t]he use of patents as references is not limited to what the patentees describe as their own inventions or to the problems with which they are concerned. They are part of the literature of the art, relevant for all they contain.” *In re Heck*, 699 F.2d 1331, 1333 (Fed. Cir. 1983) (quoting *In re Lemelson*, 397 F.2d 1006, 1009 (CCPA 1968) (internal quotation marks omitted)).

This reasoning is applicable here. Because “neither the particular motivation nor the avowed purpose of the patentee controls.” (*KSR*, 550 U.S. at 419), it is immaterial if *arguendo* “the needs of [the claimed]

semantic search differs from Gomes's need for duplicate detection that uses query-relevant information to limit the portion(s) of documents to be compared for similarity for efficiency reasons," as urged by Appellant (App. Br. 10, emphasis omitted). Regarding the combinability of Tran and Gomes, we note Appellant acknowledges that "[i]n fact, combining the two [references] would result in a system that more efficiently searches IP documents." (App. Br. 12).

Regarding Appellant's allegations of hindsight (App. Br. 10, 12), we are cognizant that our reviewing courts have not established a bright-line test for hindsight. The U.S. Supreme Court guides that "[a] factfinder should be aware, of course, of the distortion caused by hindsight bias and must be cautious of arguments reliant upon *ex post* reasoning." *KSR*, 550 U.S. at 421 (citing *Graham v. John Deere Co. of Kansas City*, 383 U.S. 1, 36 (1966)). Nevertheless, the Supreme Court also qualified the issue of hindsight by stating "[r]igid preventative rules that deny factfinders recourse to common sense, however, are neither necessary under our case law nor consistent with it." (*Id.*).

Here, we see the hindsight question before us as a *balancing test*, i.e., whether the Examiner's proffered combination of references is merely:

- (1) "the predictable use of prior art elements according to their established functions" (*KSR*, 550 U.S. at 417), consistent with common sense; or,
- (2) would an artisan reasonably have combined the cited references in the manner proffered by the Examiner *but for* having the benefit of the claim to use as a guide (i.e., impermissible hindsight)?

After reviewing the respective teachings and suggestions of the cited references, we find the evidence more strongly supports the first prong of the balancing test. We agree with the Examiner's responsive arguments:

In this case, both Tran and Gomes are directed toward the field of document processing. Semantic search is well known in the art, as noted by Appellant (Brief at 8.), and is advantageous over traditional key word searching because it takes into account the meanings of the words in a query and the documents being searched. This advantage is highlighted by Gomes (Gomes at col. 12, lines 35-48) and at the time of the invention, would have motivated one of ordinary skill in the art to modify Tran using the Gomes's disclosure.

(Ans. 18).

We observe Gomes expressly teaches "natural language processing techniques may be used to apply a syntactic analysis" and also "rather than simply looking for keyword occurrences, the sentences or paragraphs that have meanings similar to those of the query may be sought" (Gomes, col. 12, ll. 36-44), which we find would have taught or suggested a "semantic relationship among one or more IP documents by determining similarity in paragraphs," as recited in Appellant's claim 1, when combined with Tran's method for processing intellectual property. Therefore, on this record, we are not persuaded the Examiner engaged in impermissible hindsight, as Appellant contends. (App. Br. 10, 12).

We agree with the Examiner's finding that "Tran and Gomes are analogous art because they are both directed toward the same field of endeavor of document processing." (Ans. 4, 7). Given the teachings of Tran's method for processing intellectual property (*see* Ans. 3-4), and Gomes' teaching of determining semantic relationships (col. 12, ll. 36-44),

we find the Examiner provided sufficient articulated reasoning with some rational underpinning to support the legal conclusion of obviousness:

At the time of the invention it would have been obvious to one of ordinary skill in the art to modify the agent in Tran to perform the steps of determining semantic relationship among one or more IP documents by determining similarity in paragraphs, linking similar paragraphs to model the semantic relationship, and extracting text from sentences reflecting the semantic relationship and matching the documents by the created relationship, as taught by Gomes.

The motivation for doing so would have been because this allows for documents to be matched to a query by more than by matching keyword occurrences but instead by matching actual meanings of sentences and paragraphs within documents. Gomes at col. 11, lines 50-9.

(Ans. 4-5).

Moreover, Appellant has not demonstrated the Examiner's proffered combination of references would have been "uniquely challenging or difficult for one of ordinary skill in the art." *See Leapfrog Enters., Inc. v. Fisher-Price, Inc.*, 485 F.3d 1157, 1162 (Fed. Cir. 2007) (citing *KSR*, 550 U.S. at 418). Nor has Appellant provided objective evidence of secondary considerations which our reviewing court guides "operates as a beneficial check on hindsight." *Cheese Systems, Inc. v. Tetra Pak Cheese and Powder Systems*, 725 F.3d 1341, 1352 (Fed. Cir. 2013). (*See also* App. Br. 26, "Evidence Appendix None.")

To the extent that Appellant advances a "teaching away" argument ("Gomes points away from the invention of locating IP information for the user. Gomes would have eliminated documents to speed up search, which is not the objective of the present invention." (App. Br. 8)), "[a] finding that two inventions were designed to resolve different problems . . . is

insufficient to demonstrate that one invention teaches away from another.” *Nat’l Steel Car, Ltd. v. Canadian Pac. Ry., Ltd.*, 357 F.3d 1319, 1339 (Fed. Cir. 2004). A reference does not teach away if it merely expresses a general preference for an alternative invention from amongst options available to the ordinarily skilled artisan, and the reference does not discredit or discourage investigation into the invention claimed. *In re Fulton*, 391 F.3d 1195, 1201 (Fed. Cir. 2004).

Here, we do not find that any additional steps taught by Gomes, such as detecting duplicate documents and removing duplicate documents from a results list, would interfere with an effective method that searches for similar documents because both methods require identifying similar documents. Therefore, for at least the aforementioned reasons, we are not persuaded the Examiner erred by improperly combining the cited Tran and Gomes references under § 103.

B. Tags and Meta-Tags within the meaning of claims 1 and 2

Issue: Under § 103, did the Examiner err in finding the combination of Tran and Gomes would have taught or suggested “identify[ing] one or more IP documents each having a tag responsive to the IP interest,” within the meaning of claim 1, and “wherein the tag comprises a meta-tag,” within the meaning of claim 2?

Appellant contends Tran does not teach identifying one or more IP documents each having a tag responsive to the IP interest. (App. Br. 6).

Regarding the claimed IP documents having a tag, claim 2 depends from claim 1, and further recites “wherein the tag comprises a meta-tag.” We observe Appellant remarks “[a]s noted on page 32 of the instant

specification: ‘In one implementation, meta-tags are generated for each patent document. Based on the patent document meta-tags (such as inventorship or cited prior art or claim wordings) . . .’” (App. Br. 6). The Examiner finds “intellectual property documents commonly have meta-tags” associated with them (Ans. 15), and “Tran discloses framing a patent application (i.e., IP document) in an arrangement including title, cross-referenced applications, statement of federal research, background, summary, etc. Tran at para. 0045. Each of these are meta-tags . . .” (Ans. 19).

We agree with Examiner’s findings regarding Tran’s IP document as teaching or suggesting tags and meta-tags such as those commonly found in the arrangement of a patent application, such as cross referenced applications, field of invention, and *inventorship*. (Tran, ¶¶ 0045, 0046).

Accordingly, we agree with the Examiner’s finding that Tran, when combined with the teachings and suggestions of Gomes, would have taught or suggested the contested tags and meta-tag limitations regarding claims 1 and 2.

C. Semantic Relationship as recited in claims 1 and 21

Issue: Under § 103, did the Examiner err in finding the combination of Tran and Gomes would have taught or suggested a “semantic relationship” within the meaning of independent claims 1 and 21?

Appellant contends “Tran does not teach . . . (2) semantic search” (App. Br. 6). Regarding limitation (2) (“semantic search”), we are not persuaded by Appellant’s contentions because Appellant’s contentions are not commensurate with the broader scope of the claims. Appellant’s claims

recite neither “semantic search” nor “Semantic Web”, as argued (App. Br. 6-9).

Claims 1 and 21 each recite a method step of determining a semantic relationship. Claim 1 requires “determining [a] semantic relationship among one or more IP documents by determining similarity in paragraphs, linking similar paragraphs to model the semantic relationship, and extracting text from sentences reflecting the semantic relationship” (emphasis added). Claim 21 requires “extracting information with templates having slots for pre-specified text information and applying operators to the templates to *determine semantic relationship* among one or more IP documents” (emphasis added). We agree with the Examiner’s factual findings in the record, showing that Gomes teaches these limitations of claims 1 and 21 (Ans. 16-18).

As previously discussed, Gomes expressly teaches “natural language processing techniques may be used to apply a syntactic analysis” and also “rather than simply looking for keyword occurrences, the sentences or paragraphs that have meanings similar to those of the query may be sought” (Gomes, col. 12, ll. 36-44), which we find would have taught or suggested a “semantic relationship among one or more IP documents by determining similarity in paragraphs,” as recited in Appellant’s claim 1, when combined with Tran’s method for processing intellectual property.

For these reasons, on this record, we are not persuaded the Examiner erred in finding that the combination of Tran and Gomes would have taught or suggested “semantic relationship” within the meaning of independent claims 1 and 21. For the aforementioned reasons, we sustain rejection R1 of claims 1, 2, and 21.

D. Remaining Claims of rejection R1

Issue: Under § 103, did the Examiner err in finding that the cited references, either alone or in combination, would have taught or suggested the limitations of dependent claims 3-6, 12, 13, and 18-20?

Although Appellant presents nominal separate arguments responding to the Examiner's rejection R1 (App. Br. 11-19, II through VII), we sustain the rejection R1 of dependent claims 3-6, 12, 13, and 18-20 for the reasons set forth by the Examiner in the Answer, and for the reasons discussed above regarding claims 1, 2, and 21. Both the principal Brief and the Reply Brief fail to present persuasive substantive arguments and supporting evidence. (See Reply Br. 8-11, II through VII; See *In re Geisler*, 116 F.3d 1465, 1470 (Fed. Cir. 1997); *In re Lovin*, 652 F.3d 1349, 1357 (Fed. Cir. 2011)).

For these reasons, on this record, we are not persuaded the Examiner erred regarding rejection R1 of dependent claims 3-6, 12, 13, and 18-20. Accordingly, we sustain the Examiner's § 103 rejection R1 of claims 3-6, 12, 13, and 18-20.

Rejection R2 of Dependent Claim 10

Issue: Under § 103, did the Examiner err in finding the combination of Tran, Gomes, and Kerven would have taught or suggested “three-dimensionally visualizing the IP document on a 3D display device for three-dimensional viewing,” within the meaning of claim 10?

Appellant contends “Tran, Gomes, and Kerven fail to show the 3D display device. Kerven shows a 2D display device such as a conventional 2D display screen” (App. Br. 19). The Examiner responds: “claim 10 is

broadly interpreted to require a display that permits a user to view IP documents in three dimensions.” (Ans. 22).

We agree with the Examiner’s claim construction. However, we agree with Appellant the Examiner has not shown a “3D display device for three-dimensional viewing” in any of the prior art cited in the record. (Claim 10, App. Br. 19). To teach the visualization of the IP document in three dimensions on a 3D display device, the Examiner particularly points to Kerven’s teaching of various “conventional database organizations” including a “spatial” organization. (Kerven, ¶ [0043). Kerven further describes database tables having fields or objects, and further states, “Organization via hierarchical, spatial or any hybrid model would encompass utilization of similar fields/attributes.” (*Id.*). However, merely teaching the storing of such a model does reasonably teach or suggest “visualizing the IP document on a 3D display device for three-dimensional viewing,” as recited in claim 10.

Accordingly, we reverse the rejection of dependent claim 10.

Appellant has presented no separate arguments with regard to rejection R2 of dependent claims 7 and 14-16. Arguments not made are considered waived. Therefore, we summarily sustain the Examiner’s rejection R2 of claims 7 and 14-16. *See* 37 C.F.R. § 41.37(c)(1)(vii)(2004).

Rejections R3 and R4

Appellant presented no separate arguments with regard to rejections R3 and R4. Arguments not made are considered waived. Therefore, we summarily sustain the Examiner’s rejections R3 and R4 of claims 8, 9, and 17. *See* 37 C.F.R. § 41.37(c)(1)(vii)(2004).

Reply Brief

To the extent Appellant advances new arguments in the Reply Brief (*see, e.g.*, Reply Br. 2-11 (arguing that Gomes does not teach tags)), not in response to a shift in the Examiner’s position in the Answer, we note that “[a]ny bases for asserting error, whether factual or legal, that are not raised in the principal brief are waived.” *Ex parte Borden*, 93 USPQ2d 1473, 1474 (BPAI 2010) (informative). *Cf. with Optivus Tech., Inc. v. Ion Beam Appl’ns. S.A.*, 469 F.3d 978, 989 (Fed. Cir. 2006) (“[A]n issue not raised by an appellant in its opening brief . . . is waived.” (citations and internal quotation marks omitted)).

DECISION

We reverse the Examiner’s decision rejecting claim 10 under § 103.

We affirm the Examiner’s decision rejecting claims 1-9 and 12-21 under § 103.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a). *See* 37 C.F.R. § 41.50(f).

AFFIRMED-IN-PART

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